Municipal Development Plan Review

The Regional Context of the City of Halifax Economy

Discussion Paper
Number 1

City of Halifax

Planning Department

THE REGIONAL CONTEXT OF THE CITY OF HALIFAX ECONOMY

Prepared By:
City of Halifax
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This report is the first in a series of discussion papers being prepared for the review of the Municipal Development Plan of the City of Halifax.

It was prepared by John Heseltine of the City of Halifax Planning Department under the supervision of William B. Campbell, Senior Planner.

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SUMMARY

- The historic trend to increasing concentration of population in Canada's cities was reversed during the 1970's. Population has decentralized to villages, towns, and new communities on the fringe of metropolitan areas.

- Metropolitan growth has fallen far short of expectations across Canada. Overly optomistic projections in the Halifax-Dartmouth Regional Development Plan have led to excessive provision of land for urban development, which has encouraged decentralization.

- Economic activity has decentralized along with population. Although employment in the City of Halifax economy has grown by 18 per cent, analysis indicates that this growth is not up to the level that should be anticipated, given the favourable mix of industries present here.

- The City's share of regional employment has declined in nearly every economic sector. Of particular concern are falling shares in the manufacturing; construction; transportation, communications and other utilities; and trade, which were previously important parts of the City economy.

- Subsidies from the Provincial and Federal government substantially favour other local municipalities over Halifax. As a result, residents and businesses in the City pay higher taxes to cover a larger portion of municipal costs than is common elsewhere.

- Lower taxes in other local municipalites have exacerbated the outflow of population and industry. This factor combined with direct subsidies from senior governments has encouraged residential development in Sackville and Cole Harbour and industrial development in Burnside Park in Dartmouth, rather than in Halifax.

- New population and economic forecasts prepared for the Regional Development Plan review anticipate substantially slower growth than was projected in the orginal RDP. The forecasts cover a range of possible futures from growth rates approximately equal to current levels to a fairly substantial increase if major off-shore development takes place.

- Future opportunities do exist for the region. Development of off-shore petroleum resources is the most exciting prospect but further development of the service sectors in which the City is specialized should be anticipated as well as growth of new business in electronics, ocean industries, energy technology, and bio-industries.

- The ability of the City of Halifax to take full advantage of future growth opportunities will depend on:

  (i) the availability of appropriate land within the City boundaries;

  (ii) initiative of the City in pursuing development and promoting itself; and

  (iii) Provincial and Federal policy with regard to subsidization of housing, industry, and municipalities.

INTRODUCTION: THE REGIONAL CONTEXT

Consideration of the City of Halifax economy must begin with the metropolitan region in which it is located. The Halifax Census Metropolitan Area (CMA) includes the City of Dartmouth, the Town of Bedford, and a large portion of the Municipality of the County of Halifax, as well as the City of Halifax (Map 1). It is the largest CMA in Atlantic Canada. In 1981 it contained 34 percent of Nova Scotia's population[1], and accounted for 39.5 percent of the provincial labour force.[2]

The City of Halifax is the dominant municipality in the region. Its 1981 population of 114,594 was 41.3 percent of the CMA total.[3] The City in 1981 accounted for 62 percent of all jobs in local municipalities[4] and traffic statistics show 50 percent of all vehicle trips in the region were to points within its boundaries.[5]

The economy of a city does not observe municipal limits. There is untold interaction among the four municipalities of the Halifax region. Journeys to work, shopping trips, and visits to friends and relatives cross municipal boundaries. To assess the economy of the City of Halifax properly it is first necessary to understand the regional economy of which it is a part.

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1 1981 Census of Canada.

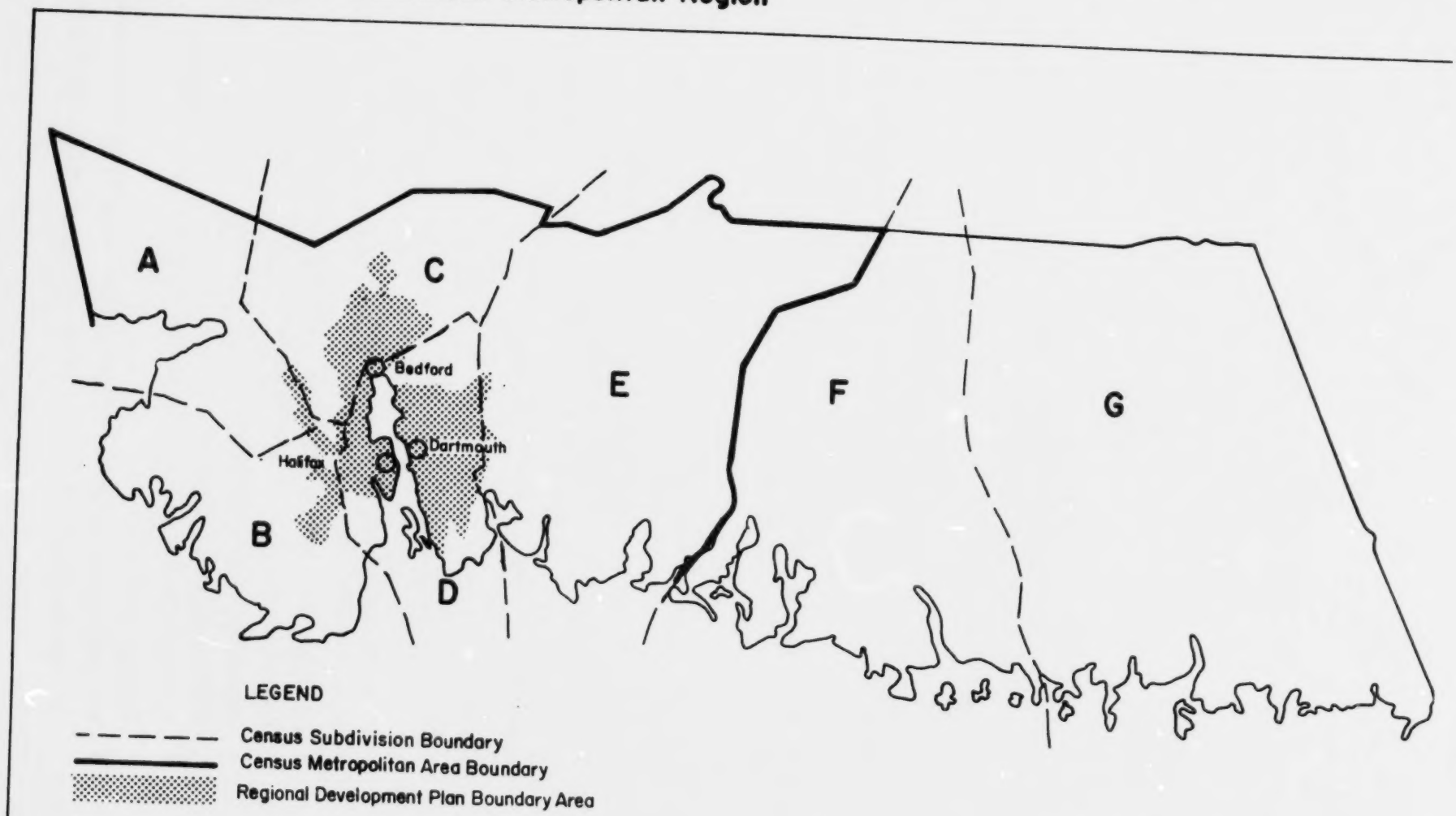
2 Halifax-Dartmouth Regional Development Review, Review of Halifax-Dartmouth Regional Economy (August, 1982), p. 14. The region referred to includes all of Halifax County (i.e., Halifax CMA and Census Subdivisions F and G).

3 1981 Census of Canada.

4 Halifax-Dartmouth Regional Development Plan Review, Employment Survey (1981).

5 Metropolitan Authority Operations Planning Group and Department of Transport Traffic Division, Trip Generation Survey (1981).

Map I Halifax-Dartmouth Metropolitan Region



Source: Housing Activity in the Region 1970-1980

The following sections outline statistical indicators and apparent trends in the region and examines these trends relative to nation-wide changes. The problems created for the City of Halifax by current economic adjustments and the emerging opportunities now apparent are discussed. Special emphasis is placed on the Regional Development Plan (RDP), which is currently under review. Since its adoption in 1976 the RDP has provided the framework for growth and change in the region. The numerous documents prepared for its review are among the best sources of information on regional trends and prospects.

CANADIAN METROPOLITAN GROWTH DURING THE SEVENTIES: THE TREND TO DECENTRALIZATION

The 1970's were very important for regional growth in Canada. The decade marked the reversal of the process of urban concentration that began before Confederation. A new trend of metropolitan decentralization arose with the development of towns, villages, and new communities as urban suburbs removed from cities. These areas differ from traditional suburbs such as Spryfield, Fairview, and Clayton Park that have been built since the late 1940's because they are not contiguous with existing cities.

This new trend caught many experts by surprise: demographers have been led to revise their perceptions of urban growth and their policy prescriptions as a result.[6] Statistics Canada, by far our largest compiler of demographic information, radically increased the geographic extent of Census Metropolitan Areas in order to encompass growth in outlying areas. The Halifax C.M.A., for example, is now nearly three times the area used for the 1971 Census (Map 1 shows current CMA Boundary).

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6 Richard E. Preston and Lorne H. Russwurm, "The Developing Canadian Urban Pattern: An Analysis of Population Change, 1971-1976" in Lorne H. Russwurm, et al. (eds.), Essays on Canadian Urban Process and Form, Waterloo, Ontario: Department of Geography, University of Waterloo, 1977, pp. 23-25.

TABLE 1: Projected Regional Plan Growth Rates Compared to Actual Census Metropolitan Area (CMA) Growth Rates, 1971-1981, for Representative Major Canadian Centres.

	Annual Pecent Growth Rates	
Region	Projected (Regional Plan Area)	Actual (CMA)
St. John's, Nfld	2.27	0.53
Halifax, N.S.	**3.85**	**1.03**
Ottawa, Ont.	2.67	1.89
Toronto, Ont.	1.93	0.78
Hamilton, Ont.	1.17	0.25
Winnipeg, Man.	1.78	0.93
Edmonton, Alta.	2.81*	3.88
Vancouver, B.C.	2.59	1.30

Source: Regional Plans

* Based on "Medium Scenario" projection.

Regions across Canada failed to anticipate the marked deceleration in urban growth. Plans developed in the late sixties and early seventies invariably projected rates of population growth far in excess of what was achieved. This is amply illustrated in Table 1, which compares actual annual growth rates for the 1971-1981 period to the rates projected in various regional plans for major urban areas in Canada. Even though C.M.A. growth rates usually compare population totals for enlarged areas, they fall far short of projected levels for all of the centres listed except Edmonton, which boomed as a result of enormous development in the Alberta petroleum sector. All other metropolitan areas, including such fast growing centres as Ottawa and Vancouver, fell far short of expectations.

The provisions made by regional planners to accommodate growth consequently exceeded necessity. Although the policy responses of regional plans examined vary a good deal, most have tended to view land requirements for urban growth as substantial. Most have therefore, planned for the development of fringe areas in order to accommodate anticipated population additions. In the Halifax-Dartmouth region this is reflected in a Regional Development Plan Boundary that provides more land for urban growth than is necessary (Map 1) and the assembly and development of large tracts in Sackville and Cole Harbour by the Nova Scotia Housing Commission.

While it is unlikely that the development of outlying areas has been caused solely by such overly ambitious regional plans, it is probably true that these plans have accentuated the phenomenon. For cities at the centre of these regions the result has been substantial depopulation. Inner cities across Canada have been typified by large, accelerating population losses averaging 12.2 percent in the 1971-76 Census period[8]. For cities such as Halifax this has led to problems with contraction of tax base reduction of grants from senior governments, and under-utilization of existing

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7 City of Halifax Planning Department, Pattern of Urban Development, April, 1982, pp. 22-23.

8 Jim Simmons, "Population Forecasting: How Little We Know," in Plan Canada, Vol. 21 no. 3, September, 1981, p. 79.

infrastructure. In general in Nova Scotia, it has meant significant costs to all taxpayers who pay for the redistribution of population through Provincial subsidies for housing and related services.[9]

The need for a fuller understanding of the causes and implications of slow growth is acknowledged by experts. When population is expanding rapidly underestimation has slight consequences because of the practice of providing excess capacity in service systems and facilities. As growth slows, however, an extra margin results in expensive, unnecessary overhead.[10] Anticipation of shifts in demographic structure (factors such as the number in various age groupings, family formation, labour force participation, etc.) and its concommitant impact on location and housing preferences become particularly relevant.

POPULATION AND DWELLING UNITS IN THE HALIFAX-DARTMOUTH REGION: THE EFFECTS OF SLOW GROWTH AND DECENTRALIZATION

Halifax has been affected by the same demographic trends as other major Canadian cities and the Halifax-Dartmouth Regional Development Plan has been as far from the mark as other regional plans of the past twenty years (See Table 1 above). Although we have treated slow growth and metropolitan decentralization as recent problems, both trends have been apparent for some time - current circumstances have simply made both more prominent. The growth rate of Halifax County, which has had constant boundaries, unlike the C.M.A., declined in every five year Census period since 1951-56. Over the same period, excepting 1966-71 during which the amalgamation of 1969 nearly tripled the City's area, Halifax lost population in absolute terms. The Halifax Peninsula declined from 93,301 in 1956 to 65,943 as of the 1981 Census (Table 2).

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9 Ibid., pp. 16-21.

10 Nirmala Cherukupalle, "Projections for Managed Growth Situations", in Plan Canada, Vol. 16 no. 2, June, 1976, p. 102.

TABLE 2: Growth In the Halifax- Dartmouth Region Since Confederation

Census	City of Halifax	City of Dartmouth	Town of Bedford	Mun. of the County of Hlfx.	Census Metro-politan Area	Halifax County
1871	29,582	2,191		25,190		56,963
1881	36,100	3,786		28,031		67,917
1891	38,437	4,452		28,496		71,358
1901	40,832	4,806		29,024	50,968	74,662
1911	46,619	5,058		28,580	57,808	80,257
1921	58,372	7,899		30,957	75,487	97,228
1931	59,275	9,100		31,829	78,600	100,204
1941	70,488	10,847		41,321	98,636	122,656
1951	85,589	15,037		61,591	133,931	162,217
1956	93,301	21,093		83,549	164,200	197,943
1961	92,511	46,966[1]		80,186[1]	183,946	225,723
1966	86,792	58,745		99,411	209,901	244,948
1971	122,035[2]	64,770		74,656[2]	222,637	261,461
1976	117,882	65,331		95,128	267,740[3]	278,341
1981	114,594	62,277	6,777[4]	104,478	277,727	288,126

1 Dartmouth annexed adjacent populated areas from the County in 1961. The population combined was 36,235 in 1956.

2 Halifax amalgamated with County lands on the Mainland in 1969. The population of this enlarged area in 1966 was 120,808.

3 The boundaries of the Halifax CMA were substantially extended in 1976.

4 The Town of Bedford was incroporated from County lands in 1980.

Population losses for the City of Halifax began with the opening of the Angus L. Macdonald Bridge in 1955, and the resulting rapid growth of Dartmouth; they have continued with development in the County of Halifax, which has resulted in population losses for Dartmouth as well as Halifax in the most recent Census counts (Table 2). Changes in the past decade are summarized on Table 4.

The distribution of growth within the region is portrayed on Figure 2 and Table 3. Decentralization was strongest in the 1971 to 1976 period when areas such as Sackville, Cole Harbour, and rural areas such as Porter's Lake began development and has moderated lately as the economy has weakened. This has slowed the decline of the City of Halifax and the outlying portions of the County (Census Sub-divisions A and G) but has not stopped their absolute losses.

Despite trends in population growth, the creation of new dwelling units has proceeded rapidly in most parts of the region. Throughout the decade the number of dwelling units increased faster than population (Tables 3 and 4). Even on the Halifax Peninsula where population fell substantially, 4,115 dwelling units were added in the past decade. In Mainland Halifax the number of dwelling units increased by nearly 50 percent and in fast-growing areas of the County increases were more than 60 percent with Sackville, the most extreme, more than doubling (Table 4). As shown on Table 4, dwelling unit additions slowed in the 1976-81 period, except in Peninsula Halifax.

The overall trend is reflected in a precipitous decline in average household size. Since 1971 household size in municipalities of the region has fallen from levels above 3.5 persons per dwelling unit to less than 3.0 or even 2.5. The Peninsula, which has the smallest households, now has only 2.4 persons per dwelling unit. Even Halifax County, which has the largest average household size, is now barely above three persons in each dwelling unit (See Figure 2).

The reasons behind the paradox of falling population and rising household formation are to be found in decline of the birth and death rates and resulting changes in population composition.

Figure 1: Growth Rates in Halifax, Dartmouth, and Halifax County, 1971-1981

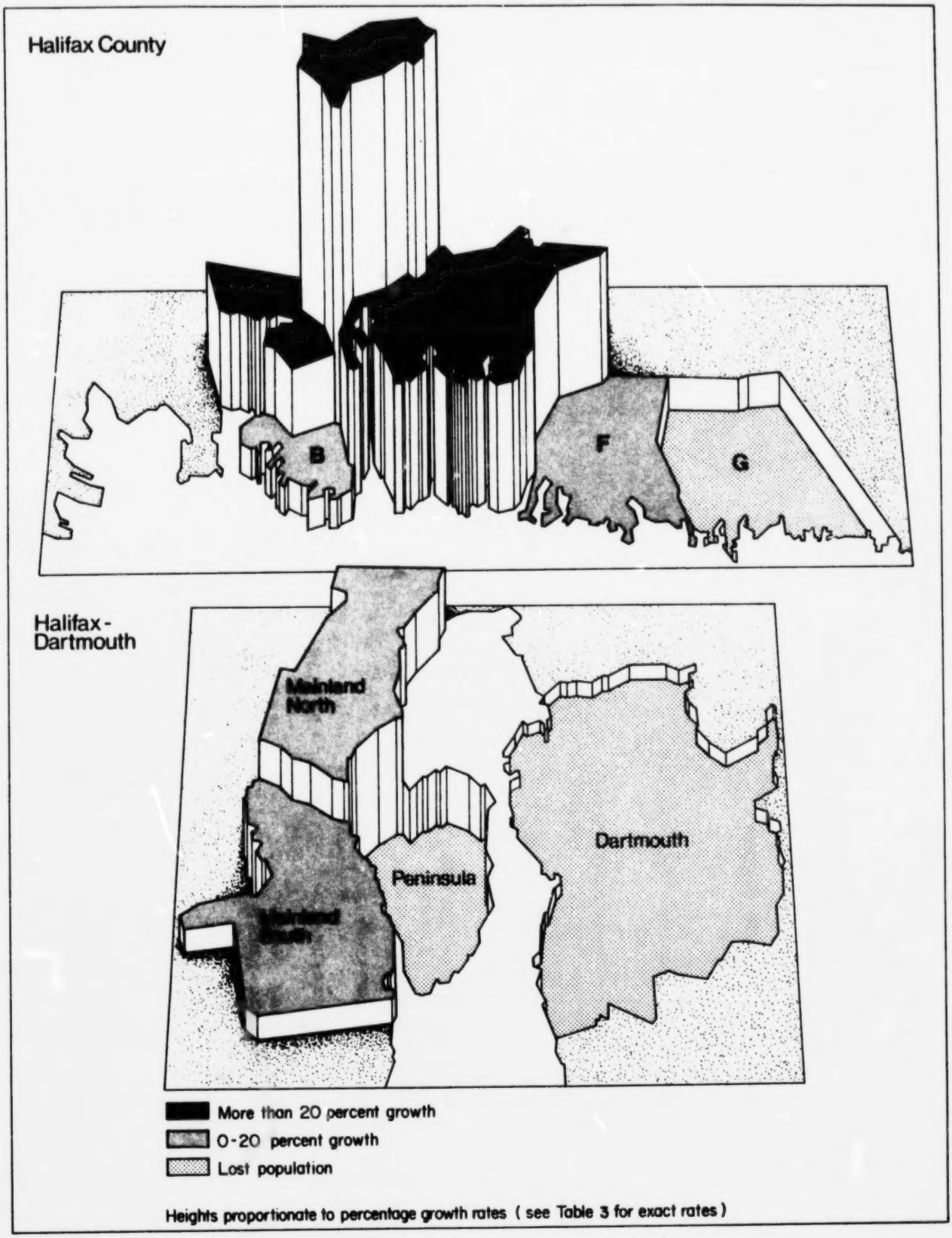


TABLE 3: Population Changes In Halifax, Dartmouth, and Halifax County 1971-1981

	1971	1976	1981	% Change 1971-1976	% Change 1976-1981
City of Halifax	**122,035**	**117,882**	**114,594**	**- 3.4**	**- 2.8**
- Peninsula	**79,256**	**69,662**	**65,943**	**-12.1**	**- 5.3**
- Mainland North	**23,320**	**26,376**	**27,343**	**13.1**	**3.7**
- Mainland South	**19,459**	**21,844**	**21,308**	**12.3**	**- 2.4**
City of Dartmouth	64,770	65,341	62,277	0.9	- 4.7
Town of Bedford			6,777		36.2
Halifax County (excluding Cities)	74,656	95,308	104,478*	27.7	9.6
A-St. Margaret's Bay Area	6,300	7,304	8,058	15.9	10.3
B-Peggy's Cove, Sambro	10,969	11,929	11,984**	8.8	0.0
C-Sackville/Windsor Jct.	16,846	29,466	33,581**	74.9	13.9
D-Halifax-Dartmouth Area	18,894	22,750	26,052**	19.8	14.5
E-Porter's Lake Area	10,675	13,318	14,402	24.8	8.1
F-Musquodoboit-Ship Harbour	5,873	5,795	5,858	- 1.3	1.1
G-Upper Musquadoboit-Sheet Harbour	4,971	4,713	4,513	- 5.2	- 4.2
H-Sable Island	12	14	11	16.7	-21.4
I-Indian Reserve (not shown)	26	19	19	-26.9	0.0

Source: Census Canada

* Excludes Town of Bedford
** Reduced boundaries for 1981 Census

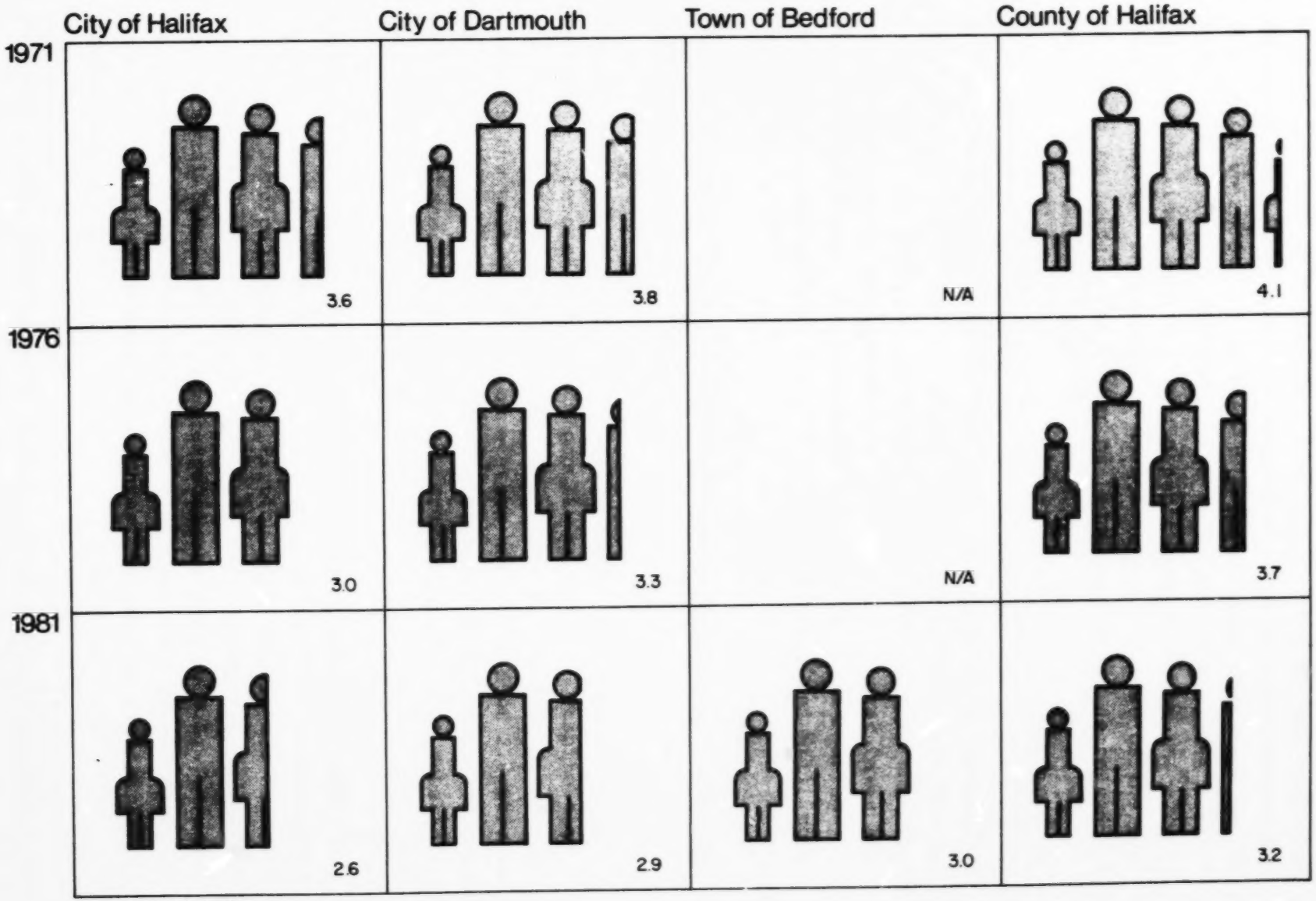
TABLE 4: Dwelling Unit Changes in Halifax, Dartmouth and Halifax County 1971-1981

	1971	1976	1981	% Change 1971-1976	% Change 1976-1981
City of Halifax	**34,105**	**39,300**	**43,780**	**15.2**	**11.4**
- Peninsula	**22,865**	**24,520**	**26,980**	**6.1**	**10.0**
- Mainland North	**6,310**	**8,385**	**9,885**	**32.9**	**17.9**
- Mainland South	**4,930**	**6,410**	**6,935**	**30.0**	**8.2**
City of Dartmouth	16,980	19,700	21,165	16.0	7.4
Town of Bedford			2,235	n/a	n/a
Halifax County (excluding Cities)	18,255	25,920	32,350*	38.5	27.9
A-St. Margaret's Bay Area	1,730	2,190	2,550	26.6	16.4
B-Peggy's Cove, Sambro	2,765	3,300	3,575**	19.3	8.3
C-Sackville/Windsor Jct. D-Halifax-Dartmouth Area	4,465	5,970	7,145**	33.7	19.7
E-Porter's Lake Area	2,400	3,510	4,135	46.3	
F-Musquadoboit-Ship Harbour	1,540	1,720	1,875	11.7	9.0
G-Upper Musquadoboit-Sheet Harbour	1,255	1,355	1,445	8.0	6.6
H-Sable Island	5	5	n/a	0.0	n/a
I-Indian Reserve	5	n/a	n/a	n/a	n/a

Source: Census Canada

* Excludes Town of Bedford
** Reduced boundaries for 1981 Census

Figure 2: Average Household Size by Municipality in the Halifax - Dartmouth Region



Source: Census of Canada

Between 1971 and 1979 (the last year for which data are available) the birth rate in Nova Scotia has fallen from 18.1 per thousand population to 14.6. It is presently barely more than half of the birth rate in 1950. Similarly, but much more slowly, the death rate has declined from 8.5 to 8.0 per thousand.[11] As a consequence, the population of Nova Scotia, like that of the rest of Canada is aging: the number of young people has decreased and numbers over 65 have risen.

The tendency in the Halifax region has been for the older population to remain in the Cities, for young people starting careers to come to the Cities, and for those forming families to migrate to the County. In general, the groups that predominate in the Cities tend to have small households with no children. Lower taxes and less expensive land have attracted the bulk of child-rearing couples to areas such as Sackville, Cole Harbour, and still more distant rural areas.

GROWTH AND CHANGE IN THE REGIONAL ECONOMY: SECTORAL CHANGES AND DECENTRALIZATION

Overall economic growth in the region during the seventies has fortunately been stronger than population growth. Despite high unemployment figures at present, more than 33,000 jobs have been added in the past decade at an average annual rate of 2.8 percent (compared to population growth of 1.03 percent per year). Because of large numbers entering the workforce, however, this substantial expansion has not always been sufficient.

Table 5, showing employment and production growth by economic sectors, indicates that the fastest growing sectors in the region were the "service" industries. Particularly notable are "Trade"; "Finance, Insurance, and Real Estate"; and "Community, Business, and Personal Services", which respectively grew by 4.0, 7.7 and 4.2 percent annually. "Goods Producing" sectors, by contrast, generally declined in employment terms, though not necessarily in production.

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11 Nova Scotia Department of Health, Vital Statistics, 1979, Halifax: Province of Nova Scotia, 1979, p.12.

TABLE 5: Employment and Real Domestic Product by Sector, Halifax-Dartmouth Region - 1971-1981

	Employment				Real Domestic Product			
	1971	% of Total	1981	% of Total	1971	1981	Region as % of N.S. 1971	Region as % of N.S. 1981
					(in millions of constant 1971 $)			
Goods Producing								
Agriculture	432	0.4	247	0.2	2	1	6	3
Forestry	199	0.2	123	0.1	1	0	7	2
Fishing	413	0.4	209	0.2	3	2	7	4
Mining	288	0.3	317	0.2	2	4	5	5
Manufacturing	10,009	9.5	8,200	5.9	64	71	25	17
Construction	7,521	7.2	8,044	5.8	64	82	38	42
Total	18,862	18.0	17,140	12.4	135	161	25	21
Service Producing								
Transportation, Communication & Utilities	9,809	9.4	12,651	9.3	105	204	41	47
Trade	17,149	16.3	25,538	18.5	108	149	40	39
Finance, Insurance and Real Estate	5,292	5.0	11,078	8.0	147	296	58	74
Community, Business and Personal Services	28,745	27.4	43,569	31,5	170	232	43	43
Public Administration and Defence	23,764	22.7	28.160	20.4	223	284	60	63
Total	84,759	80.8	120,996	87.6	753	1,164	49	53
Industry Unspecified and Undefined	1,225	1.2	—	—	—	—	—	—
Total All Industries	104,846	100	138,136	100	888	1,325	42	44

Source: Halifax-Dartmouth Regional Development Plan Review, Review of Halifax-Dartmouth Regional Economy, August, 1982, p. ix.

The outward drift that has characterized population and households in the region has similarly influenced economic activity. Employment has grown in the City of Halifax but not at a rate comparable to other municipalities. Of 33,479 jobs added in the region, in the 1971-1981 period, 13270 or 39 percent were in Halifax. Employment in the City, therefore, grew by only 18 percent compared to a regional rate of 32 percent. Table 7 shows that growth in Halifax has lagged behind regional growth in every major employment category. Particularly notable are losses in manufacturing, construction, transportation and communication, and trade and commerce (Groups 2, 3, 4 and 5). Even Groups 6, 7 and 8, in which the Cities are to specialize according to the Regional Development Plan,[12] Halifax's share has declined, though more moderately. The category "primary industries", in which Halifax has gained, is the most minor grouping, accounting for less than 400 jobs in the City in 1981 (See Tables 1A and 1B in Appendix I for detailed breakdowns).

A widely accepted technique for analysing the causes of regional employment changes is called "mix-and-share analysis."[13] This simple statistical model allows us to assess, the contribution of overall regional growth, municipal economic structure, and other factors such as business migration and entrepreneurship to employment change by economic sector and for the municpal economy as a whole. The methodology assumes the two leading factors in the growth of a local economy are the growth of the region in which it is located (the "regional growth effect") and the expansion of those economic sectors in which the local economy is specialized (the "industry mix effect"). The remaining portion of growth is attributed by the model to other factors, the most important of which is migration, which results in the municipality's share of industry (the "municipal shares effect"). The figures produced show the contribution to local employment change of each of these factors.

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12 Metropolitan Area Planning Commission, op cit., p. 46.

13 Avrom Bendavid, Regional Economic Analysis for Practitioners, revised edition, New York: Proeger, 1974, pp. 81-98.

TABLE 6: Percentage of Employed Labour Force Showing Place of Work by Industry Division for Local Municipalities 1971, 1981, and Percent Changes

	City of Halifax			City of Dartmouth			County of Halifax		Town Of Bedford	
	'71	'81	%ch.	'71	'81	%ch.	'71	'81	'81	%ch.*
1. Primary Ind.	20	24	+ 4	13	28	+15	67	46	2	-19
2. Manufacturing	61	42	-19	23	38	+15	16	18	2	+ 4
3. Construction	56	33	-23	20	33	+13	24	28	6	+10
4. Trans., Comm.	77	56	-21	11	25	+14	12	17	2	+ 7
5. Trade	69	54	-15	20	31	+11	11	11	4	+ 4
6. Fin., Insurance Real Estate	82	77	- 5	14	16	+ 2	4	5	2	+ 3
7. Com. Bus., Per. Services	71	69	- 2	16	19	+ 3	13	10	2	- 1
8. Admin. & Defence	72	70	- 2	14	10	- 4	14	17	3	+ 6
9. Unspecified	34	—	—	8	—	—	58	—	—	—
Total	69%	62%	- 7	17%	22%	+ 5	14%	13%	3%	+ 2

* Difference between County of Halifax, 1971, and the total of County of Halifax plus Bedford, 1981.

Source: 1971 Census of Canada.

1981 Halifax-Dartmouth Regional Development Plan Review, Employment Survey.

The results of mix-and-share analyses performed on the City of Halifax, City of Dartmouth, and the Municipality of the County of Halifax (including the Town of Bedford) for 1971 to 1981 are presented in Appendix II. The figures for Halifax show dramatically the degree to which the City's favourable industry mix has been counterbalanced by negative share factors (Appendix II, Table IIA). Overall, the mix of industry found in the City of Halifax should have generated 1,351 jobs in addition to 24,100 jobs that should have been added if all sectors had grown at the same rate as the regional economy; however, only 13,576 jobs were added because of a municipal shares effect of -11,875. In other words, this analysis confirms with greater precision the statement made above that Halifax has fallen short of employment growth relative to the region because of the outward drift of economic activity.

Analyses of Dartmouth and the County buttress this assertion (Appendix II, Tables IIB and IIC respectively). In Dartmouth the mix of industries which is relatively weighted toward manufacturing, transportation and trade activities concentrated in Burnside Industrial Park, accounted for only 50 additional jobs, but the municipal shares effect accounted for 7,130 jobs. This resulted in employment expansion in Dartmouth more than twice what would have been expected from the total growth of regional employment (i.e., 12,995 new jobs compared to a regional growth effect of 5,814). Similarly, Halifax County nearly doubled its growth in comparision to overall regional growth, despite an industry mix effect of -1,402 Its municipal share effect added 4,932.

Inspection of the results for Halifax on a sector by sector basis further illuminates the problems faced by the City (Appendix II, Table IIA). Aside from the "primary sectors" (Groups 1 through 4) in which employment is relatively insignificant, the municpal shares effect is substantially negative. In the manufacturing and construction sectors in which the City was relatively weak at the outset of the seventies both the mix and share effects were strongly negative. Figures for the remaining "service" sectors, in which the City is specialized, are particularly disturbing

though. Although substantial gains were obtained in each of these categories, the municipal shares effect, to a degree, reduces the benefits of the specialization reflected in the industry mix effect. In the trade sector, which was once the central part of the Halifax economy, the shares effect was sufficient to counteract the benefits of the City's specialization.

THE CAUSE AND EFFECTS OF DECENTRALIZATION: THE ROLE OF SENIOR GOVERNMENTS AND THEIR FISCAL IMPACT ON THE CITY OF HALIFAX

The consequences of structural changes in the City's economy combined with its declining population are outlined in the recent presentation of the City to the Public Utilities Board in support of the successful application to annex lands from the County of Halifax.[14] Based on evidence similar to that presented above, the City asserted that activities of the Provincial Government play an important role in decentralization and that this has had a detrimental effect on the citizens of Halifax. The loss of population and especially economic activity has eroded the City's tax base, while the demand for municipal services has remained more or less constant. As a result, Halifax has a high residential tax rate and the highest business tax rate in Canada.[15] Indeed, business taxes are so high as to discourage commercial and industrial development.[16]

It is demonstrable that this is not a favourable tendency for the region as a whole. The construction of new schools in the County even as sound school buildings in Halifax are closed, the provision of new roadways, the subsidization of land development, and the costs of other essential services in newly developed areas are borne by taxpayers in Halifax and Dartmouth and across Nova Scotia, as well as by residents of the County.[17]

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[14] City of Halifax, Planning Department, Pattern of Development.

[15] F.H. Finnis, "The Weight of Property Taxation in Canada - Single Family Dwellings and Light Industrial Property," in Canadian Tax Journal, Vol. 28 no. 3 (May-June, 1980), p.290.

[16] City of Halifax Planning Department, Pattern of Urban Development, pp.23-26.

[17] Ibid., pp.26-27.

The Province of Nova Scotia has taken an active role in encouraging decentralization in the region. The bulk of new residential development in the County has been constructed on Nova Scotia Housing Corporation land assemblies in Sackville and Cole Harbour. The NSHC provides cheaper land and subsidized mortgages in these areas that, along with lower County taxes, attract young families from the Cities.

The ability of the County to maintain low tax rates is also to a large degree attributable to the Province. As a recent report for the Province of Nova Scotia by Clayton Research Associates points out, substantial subsidies in the areas of police protection, transportation services, and fiscal services (primarily education costs) diminish the County's tax burden relative to Halifax and Dartmouth.[18] The difference between City of Halifax and County of Halifax expenditure per capita in these three categories was $307.51 in 1979[19] or 81.3 percent of the total difference between per capita expenditures shown on Table 7.

Comparison of capital debt ratios (the ratio of debt charges to total municipal revenues including taxes, grants, and transfers) supports the same point (Table 8). Although the gross debt ratio of the County is nearly three times as large as that of the City of Halfax, the difference in net debt ratios, which take into account support from the Province and, in the County's case, debts carried by the Cities as a result of past annexations, are slight (payments from other municipalities covered 9.3 percent of Halifax County's $11,290,980 in annual debt charges in 1981 and were broken down as follows: City of Halifax, $602,624; City of Dartmouth, $414,939; Town of Bedford, $34,829)[20]. Debts incurred to

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18 Clayton Research Associates, Housing Policy Study, prepared for Nova Scotia Department of Municipal Affairs, January, 1982, pp. B-32-B-34.

19 Ibid.

20 Tom Leblanc, Department of Municipal Affairs.

TABLE 7

MUNICIPAL EXPENDITURES PER CAPITA
LOCAL MUNICIPALITIES WITHIN THE HALIFAX-DARTMOUTH REGION
(1979* Dollars)

Service Category	City of Halifax	City of Dartmouth	County of Halifax
General Government	49.42	22.51	16.03
Protective Services	144.57	107.78	30.97
Transportation	66.43	49.20	6.97
Environmental Health and Development	27.73	17.53	21.56
Public Health and Welfare	91.50	87.31	59.43
Recreation and Culture	31.63	22.47	9.70
Fiscal Services including debt charges, transfers to own agencies and transfer to reserves	396.68	361.39	285.43
Total Expenditures	807.96	668.19	429.87

* Expenditures per capita determined by dividing 1979 expenditures by 1976 Census population, the latest respective figures available.

Source: Clayton Research Associates, Housing Policy Study, prepared by N.S. Department of Municipal Affairs, January, 1982, p. B-33.

support development in the County are obviously borne to a great degree by other governments. Indeed, where annexation of developed land has occurred, these debts have been directly assumed by urban municipalities.

In short, the costs of development in the County are substantially covered by the Provincial Government, while the Cities are required to pay their own way. This is clearly reflected by the tax rates prevailing in local municipalities in Table 9. In order to meet greater responsiblities, the Cities of Halifax and Dartmouth levy residential tax rates more than twice the County base rate and business taxes two to almost three times the County rate. This is a substantial inducement for development in Halifax County. The difference of nearly 13 percent between Halifax business rates and Dartmouth business rates, which was previously much wider, likewise encourages commercial and industrial development in Dartmouth.

An example presented before the Public Utilities Board in support of annexation illustrated the last point. The assessed value of land for one of the few remaining large industrial-type operations on the Halifax Peninsula is $6.15 per square foot, compared to $1.10 per square foot for good serviced land in the Burnside Industrial park in Dartmouth. The total difference is assessed land values between the existing lot in Halifax and a lot of equilavent size in Burnside is nearly $960,000. The difference between taxes paid annually on land would be approximately $60,000 more in Halifax based on 1981 rates. The difference in annual taxes paid on buildings and business occupancy taxes paid on equipment would be more than $30,000 and $50,000 respectively. If the alternate location were in the County of Halifax rather than Dartmouth, the disparity with the City of Halifax would be increased by by about 25 percent. In other words, if this plant were to move from the City of Halifax to an optimum tax location in the region, it could expect to save close to $200,000 every year.[21] This dispartiy obviously places the City of Halifax at a disadvantage in retaining existing population and employment; and in attracting new development - particularly economic development.

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[21] Calculations by City of Halifax Planning Department, based on 1981 land values, asessments and tax rates. City of Halifax Planning Department, Pattern of Urban Development, p.25.

TABLE 8

COMPARISON OF CAPITAL DEBT RATIOS AMONG THE CITY OF HALIFAX, THE CITY OF DARTMOUTH, AND THE MUNICIPALITY OF THE COUNTY OF HALIFAX, 1981

	Gross Debt Ratio[1]	Net Debt Ratio[2]	Difference
City of Halifax	**7.06**	**5.58**	**1.48**
City of Dartmouth	15.84	11.38	4.40
Town of Bedford	0.52	0.52	-
Halifax County	21.76	4.20	17.56

[1] Ratio of all debt charges to total municipal revenues.

[2] Ratio of all debt charges minus debt charges covered by Provincial grants and, in the case of the County of Halifax, by other municipalities (covering debts incurred by the County in areas later annexed by Halifax and Dartmouth) to total municipal revenues.

Source: Tom Leblanc, Department of Municipal Affairs.

TABLE 9

COMPARISON OF 1982 CITY OF HALIFAX TAX RATE WITH OTHER LOCAL MUNICIPALITIES

MUNICIPALITY	RESIDENTIAL REALTY	BUSINESS REALTY	BUSINESS OCCUPANCY	FIRE PROTECTION
Halifax City	**1.7777**	**4.1706**	**4.0846**	**.086**
Dartmouth City	1.948	3.669	3.695	n/a
Town of Bedford	1.53	2.46	2.46	n/a
Halifax County	0.82*	1.53*	1.53*	n/a

* County base rate. Rates actually vary among areas of the County depending on services provided.

CURRENT REGIONAL FORECASTS: LOWERING OF EXPECTATIONS FOR GROWTH

The current review of the Regional Development Plan has resulted in considerable revision of projections of population and economic growth. Projections of total propulation, working age population, and resident employed labour force by the Economic Outlook Task Force of the RDP Review are graphed on Figure 3. The Task Force has prepared projections for three possible future scenarios: high, medium, and low. The summary of conditions associated with each of these projections is as follows:

The Low Scenario

The low scenario is constructed on the current economic base and incorporates slower growth in certain sectors which provided the impetus in the past decade. Under this alternative total employment in the planning area is forecast to increase at an average annual rate of 0.9 percent and result in additional employment of 12,600 persons by 1991. This scenario can be compared with the 1970's when employment increased at an annual average rate of 2.7 percent and resulted in a estimated increase of 33,000 in employment over the decade. In this respect, the report points out that while the average annual growth rates for the 1970's are calculated on the basis of 1971 and estimates of 1981, it is likely that many of the industry divisions experienced the greatest growth early in the decade (1971-1981). The coming decade in the low scenario reflects the lower growth rates of the past few years (1979-1981). In more explicit terms this alternative envisages no commercial development of offshore oil and gas, only marginal increase in manufacturing and construction and restraint in public administration, and little growth in the service sector.

The Middle Scenario

The more optimistic outlook of the middle scenario reflects improved economic climates for both Nova Scotia and Canada and a continuation of the region as the dominant regional center in Atlantic Canada. Employment is expected to grow at a rate of 2 percent per annum and reach 168,000 by 1991 an increase of 30,000 over current estimates. Once again this performance is less than that of the 1970's which witnessed annual growth in the order of 2.7% per annum and a total of 33,000 additional employment. Increases in productivity, continued buoyancy in consumer spending, some spinoff from offshore energy development and expansion in trade and services are assumed to provide the impetus for modest growth.

The High Scenario Including a Major Industrial Project

During the spring of 1981 DOME Petroleum Limited announced plans for the construction of a shipyard to build vessels to carry Artic oil and natural gas. Inspite of considerable uncertainties respecting the undertaking, the selection of a site in the planning region for consideration prompted the inclusion of the estimated impact of a large shipyard as an example of a major industrial development at an additional factor in the high scenario. Based on a time-table of site selection by mid 1982, the incorporation of the impact of construction and operation of such a shipyard suggests total employment in the region would reach 181,600 by 1991. For the period 1981-1991 this would imply an increase of 43,600 jobs over the decade - 3,600 more than estimated in the High Scenario. In the operation phase, the High with Development Scenario incorporates the changes to the economic composition envisaged in the development of offshore energy resources and augmented by the additional manufacturing employment provided a development. While the inclusion of the shipyard development as an additional factor can be utilized

> as a proxy for any major industrial development, the sectoral impacts are somewhat biased towards the characteristics of a modern shipyard operation.[22]

The current projections cover a broad range of possible futures, from growth levels slightly below the recent past to potential expansion influenced by a major industrial project. All estimates are, nevertheless, considerably below the growth rates predicted by the RDP in 1974 (Figure 3).

During the seventies the relationships between the three factors portrayed on Figure 3 changed substantially. In 1977 the proportion of the total population in working age groups (15 to 65 years) was 70 percent. It rose to 74 percent in 1976 and an estimated 78 percent in 1981.[23] The inability of the economy to expand at the same rate as the working age population, however, resulted in declining ratios of resident labour force to total population. Between 1971 and 1976 the ratio of the resident labour force to total population fell from 39 to 38 percent and the ratio to working age population from 56 to 52 percent.

For 1981, Provincial projections assume ratios of 60 and 47 percent for resident employed labour force to working and total population respectively. This is a considerably better state of affairs than more precise data from the seventies would lead one to expect. Even in the low scenario, the figures for the 1980's and 90's predict the 60 percent employment as a minimum, while the high scenario approaches 70 percent. This seems more than a little optomistic.

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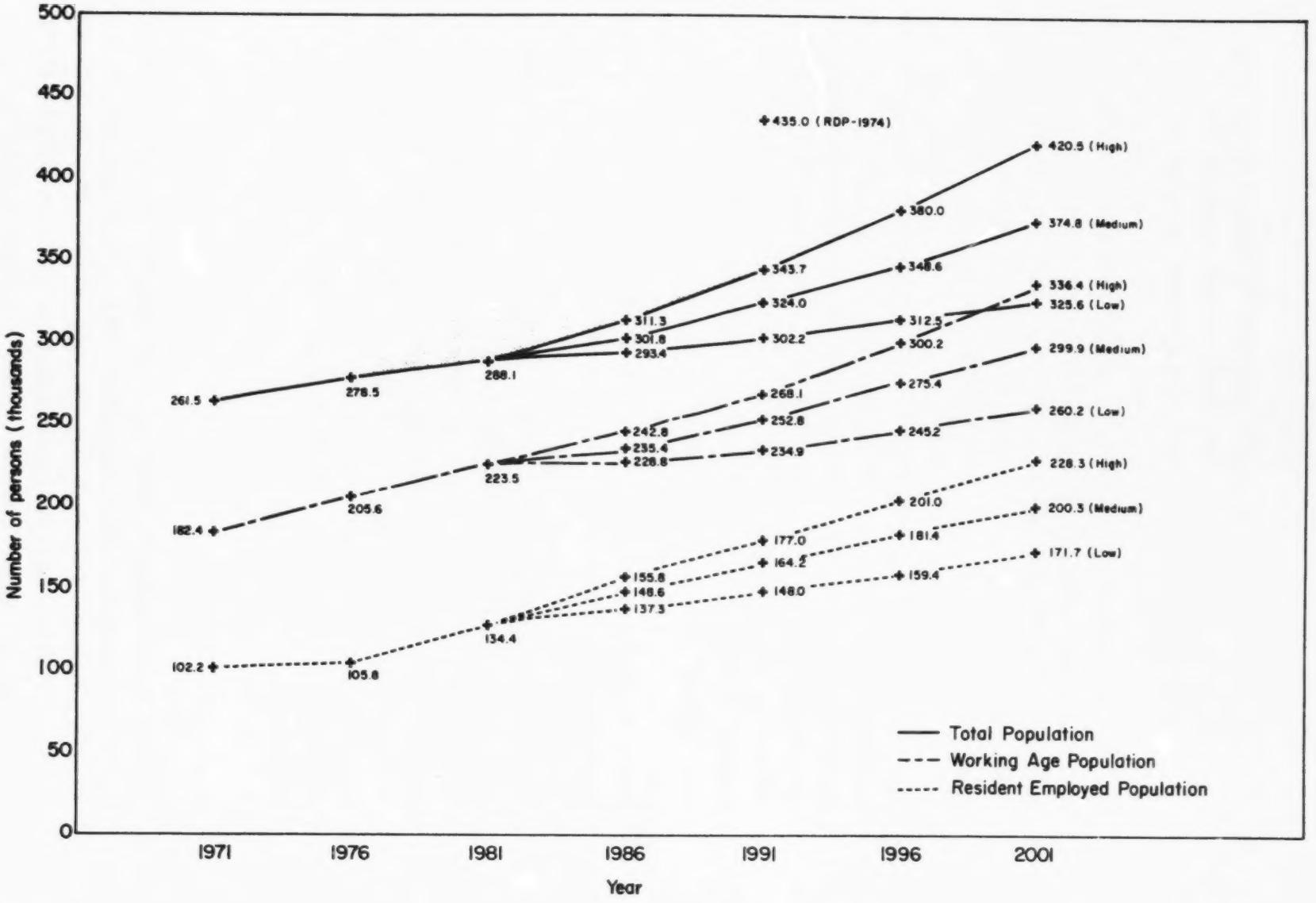
22 Halifax-Dartmouth Regional Plan Review, Population Implications of Alternative Forecasts, February, 1983, pp. 12-15.

23 1981 figures for working age population and resident employed labour force are derived from Provincial surveys rather than Census of Canada counts, which are more accurate.

Figure 3: Population and Employment Projections for Halifax - Dartmouth Region, 1971 - 2001



The report Revised Economic Forecasts, Halifax-Dartmouth Region, 1981-2001, prepared for the Regional Plan Review by Gardner Pinfold consulting economists, asserts that the rising proportion of the population in working age groups, continued increases in the participation of women in the work force, and the possibility of an end to mandatory retirement at 65 will increase the labour force.[24] The consultants predict jobs for this increased labour supply will be found largely in the service industries where growth was greatest in the seventies. In the manufacturing sector they point particularly to electronics, ocean-related industries, energy technology, and bio-industries as growth industries that may have potential for this region. Expansion of the primary sector is most likely in the "mining" category and will almost entirely depend on the success of current offshore exploration and the ability to exploit whatever finds are made.[25] The development of the offshore, in fact, is the main factor underlying the high scenario for the region. However, the scale of offshore development and its timing, cannot be predicted precisely.

Gardner Pinfold expresses a broad caution about the reliability of economic prediction for the next twenty years. Advancements in technology that we are now experiencing, particularly in the area of computers, are likely to have major impacts on the form of work and labour requirements. Other factors that are unforseeable now are equally probable to arise with similar consequences.[26]

It is, therefore, commendable that projects for the Regional Plan now acknowledge a range of possibilities. How these scenarios will be interpreted into policies of a revised RDP has not been fully determined. Despite reservations about some aspects of the regional projections, the moderation of expectations relative to the original plan is encouraging. More realistic projects should lead to more logical planning for the region that can only oe beneficial to the City of Halifax

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24 Gardner Pinfold Consulting Economists, Revised Economic Forecasts, Halifax-Dartmouth Region, 1981-2001, September 15, 1982, pp.37-38.

25 Ibid., pp.38-41.

26 Ibid., pp.41-42.

THE FUTURE OF THE CITY OF HALIFAX WITHIN THE REGION: ISSUES AND OPPORTUNITIES

Even though growth projections have been brought down from previous levels in the current RDP review, opportunities today appear to have greater potential than the prospects of the early 1970's. The most significant possibility is, of course, development of natural gas or oil offshore. Commercial development of such a find, whether off Newfoundland or Nova Scotia, will undoubtedly have considerable benefits for this area. The gains accruing to the City of Halifax will not only depend on the location of whatever fields are exploited but also on the initiative shown by the City in pursing offshore-related development.[27]

At present Halifax is enjoying some benefits from exploration activity, as are other local municipalities. The geology of the Scotian Shelf and discoveries to date indicate commercial gas development is more likely than development based on oil resources Development of natural gas resources will not have as great an economic impact as oil but will still have significant benefits. An oil find, too, is not completely out of the question given recent encouraging results in other Atlantic Canadian fields.[28]

Experts do not project large long-term increases in labour demand as a result of anticipated offshore development. The detailed economic impact study, Scotian Shelf Gas Development, prepared for the Province of Nova Scotia by Thorne, Stevenson and Kellogg and Gardner Pinfold predicts an offshore labour demand of 196 people in 1981 during the exploration phase, rising to 5,289 in 1986 if development occurs, and falling to 625 in 1991 when production

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27 City of Halifax, Report of the Task Force on Offshore Activities, Vol. 1, December 1, 1981, p.19.

28 Ibid., pp. 5-6.

should be completely underway.[29] The stress on the local labour supply as a result of this demand, particularly when it peaks, will depend on training programs that should be underway at present.[30]

The development of a new economic sector, of course, will have impacts on the existing economic structure. Offshore industry will purchase materials and services from other local industries and both offshore employees and employees of offshore suppliers can be expected to make purchases from their personal income. These impacts can be expected to fluctuate as offshore activity varies but are more difficult to predict precisely. The Scotian Shelf Gas Development Study projects figures for ten scenarios using two different multiplier models.[31] During the development phase, employment in supplying industries could increase by 1,500 to 3,500 people, falling to 500 to 1,100 in the long-run production phase.[32] Changes in household consumption (i.e., purchases by employees) following from this will result in anywhere from 588 to 2,472 additional jobs in the production phase.[33]

These various positive economic impacts as well as substantial increases in provincial and, to a considerably lesser extent, municipal tax revenues should generally result in a more bouyant local economy if offshore development proceeds. This is, however, an uncertain prospect. Not only must exploitable petroleum resources be discovered but world oil and gas prices must remain at a sufficiently high level to justify the expense of offshore extraction.

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29 Thorne, Stevenson, and Kellogg and Gardner Pinfold, Scotian Shelf Gas Development: The Economic Impact on Nova Scotia, Vol. 2 - Report, November, 1981, p. 8.

30 Ibid., p. 9.

31 Ibid, pp. 54-62.

32 Thorne, Stevenson, and Kellogg and Gardner Pinfold, Scotian Shelf Gas Development: The Economic Impact on Nova Scotia, Vol. 1 - Executive Summary, November, 1981, p. 10.

33 Thorne, Stevenson, and Kellogg and Gardner Pinfold, op cit., Vol. 2, pp. 57-58.

While offshore development holds the greatest promise for economic growth, other growth sectors ought also to be considered. Other sectors cited above from Gardner Pinfold's Revised Economic Forecasts - electronics, ocean industries, energy technology, and bio-industries - all have potential for the region. The City of Halifax is especially well-positioned to take advantage of growth in these highly specialized industries because of the presence of universities, hospitals, and research facilities. American economist Wilbur S. Thompson pointed out over a decade ago at the Encounter sessions that specialization in higher education and research is the region's greatest asset for economic growth.[34]

As the mix-and-share analysis presented above demonstrates, the City of Halifax has an economic structure that should ensure at least steady growth. Within the Halifax-Dartmouth region and, indeed, within Atlantic Canada, Halifax is the major centre of office and commercial employment, the sectors where recent growth has been greatest. The fact that the City has not enjoyed the degree of benefits that is commensurate with its industry mix is however cause for concern.

The recent re-establishement of the City of Halifax Industrial Commission and the annexation of lands in Halifax County are measures to address part of this problem. The annexation, which is currently being appealed to the Provincial Cabinet by the County, provides the City with an area in which to develop an industrial park as well as additional lands in which commercial, office, residential, or recreation developments might be considered. The City does not presently have an industrial park in which to offer developers appropriate sites for construction of factories or warehousing. The annexed land will allow the promotion of Halifax as a suitable location for all types of new industry and allow the City to offer alternative sites for existing businesses on the Peninsula that must move. Similarly, commercial enterprises other than industrial uses not attracted to the City at present may be accommodated on some suitable sites in the annexed lands that are not to be developed as an industrial park.

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34 Voluntary Economic Planning Board, Encounter on Urban Environment: Historian's Report, Halifax, 1970, pp. 66-67.

Promotion of the City of Halifax is to some degree hindered by high commercial and industrial taxes. Encouragement of business development on annexed lands should help to reduce rates by creating a sounder tax base. Nevertheless, it is true, as illustrated above, that the City receives far less subsidy, both directly and indirectly, from senior governments than the other local municipalities. In addition, the City has the highest proportion of government-owned buildings paying grants that are frequently less than would be required by provincial assessments, despite recent improvements as a result of the Provincial Fiscal Justice paper.[35]

Remedies for these conditions would be very helpful to the City. Higher levels of services expected in a major City will maintain tax rates in Halifax at levels above counties and towns in Nova Scotia, but the disparity cannot be allowed to be so great as to draw development away from the City. Adjustment of Provincial and Federal programs to recognize this is important. Among possible changes would be adoption of housing programs to stimulate home ownership in urban areas, improved cost-sharing arrangements, and acceptance of private appeal procedures by government agencies. Present economic conditions will however make such adjustments difficult to obtain.

The City can benefit from both co-operation and competition within the region. The growth of Halifax is tied to the growth of the region. The City must emphasize future opportunities for which it is suited and take measures to attract these activities. The present assets of the City of Halifax - a healthy downtown, good residential neighbourhoods, attractive historic buildings, and the natural beauty of her location - need only be shown to developers to draw interest.

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35 Nova Scotia Department of Municipal Affairs, Fiscal Justice: Proposals for a New Municipal Grant System, July, 1979. Unlike private property owners governments do not have to submit to the appeal procedure to change assessments; they may unilaterally adjust assessments.

APPENDIX I

Regional employment by industry divisions
and major groups, 1971 and 1981.

TABLE IA

EMPLOYED LABOUR FORCE SHOWING PLACE OF WORK BY INDUSTRY DIVISIONS AND MAJOR GROUPS CITY OF HALIFAX, CITY OF DARTMOUTH, MUNICIPALITY OF THE COUNTY OF HALIFAX, 1971

	City of* Halifax	City of * Dartmouth	Mun. of ** Halifax Co.	Total Region
TOTAL	72,320	17,460	15,066	104,846
Farms	16	14	320	350
Services Incidental to Agriculture	43	9	30	82
Agriculture	59	23	350	432
Logging	11	-	160	171
Forestry Services	21	-	7	28
Forestry	32	-	167	199
Fishing	51	-	258	309
Fishing & Services	79	6	19	104
Hunting & Trapping	-	-	-	-
Fishing & Trapping	130	6	277	413
Metal Mines	-	-	-	-
Mineral Mines	14	45	20	79
Non-Metal Mines (ex. coal mines)	4	23	12	39
Quarries & Sand Pits	15	23	49	87
Services Incidental to Mining	10	61	12	83
Mines (incl. Mill) Quarry & Oil Wells	43	152	93	288
Food & Beverage Industries	2,258	368	297	2,923
Tobacco Product Industries	21	-	-	21
Rubber & Plastics Products Ind.	32	56	12	100
Leather Industries	5	6	-	11
Textile Industries	43	11	9	63
Knitting Mills	-	-	-	-
Clothing Industries	27	6	7	40
Wood Industries	21	28	340	389
Furniture & Fixture Industries	21	73	36	130
Paper & Allied Industries	118	45	231	394
Printing Publishing & Allied Ind.	835	96	30	961
Primary Metal Industries	21	68	21	110
Met.Fab.Ind. (ex.Mach.& Trans.Equip.)	183	215	37	435
Machinery Industries (ex. Elec.Mach.)	166	34	12	212
Transportation Equipment Industries	1,430	305	208	1,943
Electrical Products Industries	241	367	48	656
Non-metallic Mineral Products Ind.	145	85	99	329
Petroleum & Coal Products Ind.	123	300	173	596
Chemical & Chemical Products Ind.	236	141	25	402
Miscellaneous Manufacturing Ind.	214	51	29	294
Manufacturing Industries	6,140	2,255	1,614	10,009
General Contractors	1,664	728	1,106	3,498
Special-Trade Contractors	2,515	810	698	4,023
Construction Industry	4,179	1,538	1,804	7,521

TABLE 1A (CONT'D)

	City of* Halifax	City of * Dartmouth	Mun. of ** Halifax Co.	Total Region
Transportation	3,844	654	857	5,355
Storage	91	17	-	108
Communication	2,708	276	141	3,125
Electric Power Gas & Water Utility	933	152	136	1,221
Trans.Comm. & Other Utility	7,576	1,099	1,134	9,809
Wholesale Trade	3,685	954	377	5,016
Retail Trade	8,192	2,540	1,401	12,133
Trade	11,877	3,494	1,778	17,149
Finance Industries	2,271	436	160	2,867
Insurance Carriers	1,264	23	30	1,317
Insurance Agencies & Real Estate Ind.	783	313	12	1,108
Finance Insurance & Real Estate	4,318	772	202	5,292
Education & Related Services	5,567	1,367	1,382	8,316
Health & Welfare Services	6,874	1,193	782	8,849
Religious Organizations	295	51	107	453
Amusement & Recreation Services	489	118	246	853
Services to Business Management	2,202	496	199	2,897
Personal Services	1,377	507	242	2,126
Accommodation & Food Services	2,347	535	546	3,428
Miscellaneous Services	1,383	287	153	1,823
Comm. Bus. & Pers. Serv. Ind.	20,534	4,554	3,657	28,745
Federal Administration	13,129	2,740	3,063	18,932
Provincial Administration	2,465	265	150	2,880
Local Administration	1,409	461	71	1,941
Other Government Offices	11	-	-	11
Public Administration & Defence	17,014	3,466	3,284	23,764
Unspecified or Undefined	418	101	706	1,225

* Figures for the cities of Halifax and Dartmouth have been adjusted to include an additional 4,825 and 1,965 respectively whose workplace was either "at home" or "not stated". The industrial distribution of each city was applied to those figures to arrive at an overall total figure. (The workplace "at home" and "not stated" is available only as a total figure for each municipal unit and census subdivision.)

** The figures for the Municipality of Halifax County were adjusted in the same manner as described above. (Workplace "at home": 800; Workplace "not stated": 1,940.) However, for the workplace "at home" data, the provincial industrial distribution was used. The latter is felt to be a better reflection of the distribution of activity with respect to the primary industries which are more concentrated in the County.

Source: Census of Canada, 1971.

TABLE IB

EMPLOYED LABOUR FORCE SHOWING PLACE OF WORK BY INDUSTRY DIVISIONS AND MAJOR GROUPS CITY OF HALIFAX, CITY OF DARTMOUTH, MUNICIPALITY OF THE COUNTY OF HALIFAX, TOWN OF BEDFORD 1981

	City of Halifax	City of Dartmouth	Mun. of Halifax Co.	Town of Bedford	Total Region
TOTAL	85,380	30,314	18,740	3,702	138,136
Farms	31	26	86	--	143
Services Incidental to Agriculture	29	19	40	16	104
Agriculture	60	45	126	16	247
Logging	2	7	84	--	93
Forestry Services	--	--	30	--	30
Forestry	2	7	114	--	123
Fishing	100	3	80	--	183
Fishing & Services	11	14	--	--	25
Hunting & Trapping	1	--	--	--	1
Fishing & Trapping	112	17	80	--	209
Metal Mines	--	--	--	--	--
Mineral Mines	7	36	5	3	51
Non-Metal Mines (ex. coal mines)	5	23	--	--	28
Quarries & Sand Pits	20	46	49	--	115
Services Incidental to Mining	16	74	33	--	123
Mines (incl. Mill) Quarry & Oil Wells	48	179	87	3	317
Food & Beverage Industries	898	606	696	7	2,207
Tobacco Product Industries	--	--	--	--	--
Rubber & Plastics Products Ind.	17	20	47	--	84
Leather Industries	3	--	4	--	7
Textile Industries	31	44	5	--	80
Knitting Mills	--	--	--	--	--
Clothing Industries	24	--	--	--	24
Wood Industries	52	19	262	--	333
Furniture & Fixture Industries	53	140	31	1	225
Paper & Allied Industries	1	230	--	--	231
Printing Publishing & Allied Ind.	716	84	7	10	817
Primary Metal Industries	--	133	--	--	133
Met.Fab.Ind. (ex.Mach.& Trans.Equip.)	125	729	46	28	928
Machinery Industries (ex. Elec.Mach.)	150	32	8	6	196
Transportation Equipment Industries	971	3	51	--	1,025
Electrical Products Industries	70	--	77	10	157
Non-metallic Mineral Products Ind.	54	60	50	78	242
Petroleum & Coal Products Ind.	133	348	135	--	616
Chemical & Chemical Products Ind.	10	167	13	8	198
Miscellaneous Manufacturing Ind.	118	516	47	16	697
Manufacturing Industries	3,426	3,131	1,479	164	8,200
General Contractors	1,076	1,349	1,213	231	3,869
Special-Trade Contractors	1,621	1,308	1,009	237	4,175
Construction Industry	2,697	2,657	2,222	468	8,044

TABLE 1B (CONT'D)

	City of Halifax	City of Dartmouth	Mun. of Halifax Co.	Town of Bedford	Total Region
Transportation	1,526	1,620	1,412	83	4,641
Storage	2,503*	293	2	--	2,798
Communication	3,480	333	95	25	3,933
Electric Power Gas & Water Utility	826	208	192	51	1,277
Trans.Comm. & Other Utility	8,335	2,454	1,703	159	12,651
Wholesale Trade	4,252	3,584	1,010	272	9,118
Retail Trade	8,370	5,039	2,243	768	16,420
Trade	12,622	8,623	3,253	1,040	25,538
Finance Industries	3,585	964	244	118	4,911
Insurance Carriers	1,664	--	2	33	1,699
Insurance Agencies & Real Estate Ind.	3,281	854	271	62	4,468
Finance Insurance & Real Estate	8,530	1,818	517	213	11,078
Education & Related Services	6,644	981	1,493	118	9,236
Health & Welfare Services	9,206	2,809	839	39	12,893
Religious Organizations	372	90	107	6	575
Amusement & Recreation Services	794	297	381	4	1,476
Services to Business Management	4,578	1,341	130	180	6,229
Personal Services	855	375	109	35	1,374
Accommodation & Food Services	5,362	1,647	939	248	8,196
Miscellaneous Services	2,089	1,033	426	42	3,590
Comm. Bus. & Pers. Serv. Ind.	29,900	8,573	4,424	672	43,569
Federal Administration	14,181	1,810	4,114	632	20,737
Provincial Administration	3,841	559	470	296	5,166
Local Administration	1,617	441	151	39	2,248
Other Government Offices	9	--	--	--	9
Public Administration & Defence	19,648	2,810	4,735	967	28,160
Unspecified or Undefined	--	--	--	--	--

* Consists primarily of one operation - Simpson's warehouse - which employs 2,467 persons. The 1971 Census may have classified these employees under Retail Trade.

Source: Halifax-Dartmouth Regional Development Plan Review, Employment Survey, 1981.

APPENDIX II

Results of mix-and-share analysis for the City of Halifax, City of Dartmouth, and the Municipality of the County of Halifax, 1971-1981, are presented on the following three tables. This analysis shows the change in employment for each economic sector and the portions of this change attributable to three factors: the overall growth of the region; the type of industries (or industrial mix) in each municipality; and the share of industry acquired by each municipality as a result of migration of business from elsewhere in the region or from outside the region, more active entrepreneurs in the municipality, or other factors. The quantity of each of these effects is determined through a statistical technique called a mix-and-share model, which assumes that total change in employment is equal to the sum of these factors.

TABLE IIA: Employment Change and Components of Employment Change by Sector for City of Halifax, 1971-1981

Sector	Change (R)*	Regional Growth Effect (N)	Industry Mix Effect (M)	Municipal Shares Effect (S)
1. Agriculture	1	19.77	-45.04	26.67
2. Forestry	-30	10.73	-22.95	-17.77
3. Fishing & Trapping	-18	43.57	-106.81	45.24
4. Mines & Quarries	1	14.41	-10.08	-3.33
5. Manufacturing	-2714	2057.89	-3167.11	-1604.78
6. Construction	-1482	1400.64	-1110.03	-1772.60
7. Transportation, Communications & Other Utilities	-2302	2539.18	-2856.61	-1984.56
8. Trade	3293	3981.04	3636.56	-4324.60
9. Finance, Insurance & Real Estate	4182	1447.22	3273.85	- 539.08
10. Commerce, Business & Personal Svcs	10000	6882.52	4225.12	-1107.65
11. Administration and Defence	2645	5702.76	-2465.73	- 592.03
Total	13576	24099.73	1351.17	-11874.90

*R = N + M + S

TABLE IIB: Employment Change and Components of Employment Change by Sector for City of Dartmouth, 1971-1981

Sector	Change 1971-81(R)*	Regional Growth Effect (N)	Industry Mix Effect (M)	Municipal Shares Effect (S)
1. Agriculture	22	7.70	-17.55	31.84
2. Forestry	7	0.00	0.00	7.00
3. Fishing & Trapping	17	0.00	0.00	17.00
4. Mines & Quarries	27	50.94	-35.63	11.69
5. Manufacturing	877	755.45	-1162.64	1284.19
6. Construction	1119	515.47	- 408.52	1012.04
7. Transportation, Communications & Other Utilities	1238	368.34	- 414.38	1284.04
8. Trade	5192	1170.71	1069.41	2951.86
9. Finance, Insurance & Real Estate	1046	258.74	585.32	201.93
10. Commerce, Business & Personal Svcs	4030	1525.65	936.58	1567.76
11. Administration and Defence	-580	1161.33	-502.13	-1239.20
Total	12995	5814.36	50.46	7130.20

*R = N + M + S

TABLE IIC: Employment Change and Components of Employment Change by Sector for the County of Halifax, 1971-1981

Sector	Change 1971-81(R)*	Regional Growth Effect (N)	Industry Mix Effect (M)	Municipal Shares Effect (S)
1. Agriculture	-204	117.30	-267.19	-54.11
2. Forestry	-53	55.97	-119.75	10.77
3. Fishing & Trapping	-201	92.83	-227.59	-66.24
4. Mines & Quarries	4	31.16	-21.80	-5.36
5. Manufacturing	22	540.94	-832.52	313.57
6. Construction	886	604.62	-479.18	760.55
7. Transportation, Communications & Other Utilities	646	380.07	-427.58	693.51
8. Trade	2783	595.91	544.35	1642.73
9. Finance, Insurance & Real Estate	528	67.70	153.15	307.14
10. Commerce, Business & Personal Svcs	1476	1225.68	752.43	-502.17
11. Administration and Defence	2456	1100.66	-475.90	1831.23
Total	8343	4812.90	-1401.59	4931.69

*R = N + M + S

POOR

QUALITY

ORIGINAL